

Document Custom Displays

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Honeywell
Industrial Automation and Control
Automation College
2820 West Kelton Lane
Phoenix, AZ 85023
(602) 313-5669

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References

Publication Title	Publication Number	Binder Title	Binder Number
<i>Picture Editor Reference Manual</i>	SW09-550	Implementation/Engineering Operations-2	TDC 3032-2

Introduction

Module Overview

About this module

This course module discusses the various tools available for documenting custom displays. It also provides guidelines as to what type of information should be included in the documentation.

Objectives

Given a custom display and guidelines for creating display documentation, select and apply the appropriate methods to document the display.

Sample test items

This course module's Criterion Test includes the following item:

In your own words, describe to your course manager the ways to document custom displays.

Documenting Custom Displays

Methods of Documenting Custom Display

Methods

There are several basic methods of documenting Custom Displays:

- comments in the display source:
 - main display comment (DEF COM),
 - comments delimited with braces { } in the entry ports of Targets, Variants, Conditions, and Values,
 - PE printout with PR or MP command,
 - 64 character file and directory descriptors,
 - Find Names utility,
 - configuration forms, and
 - design specification.
-

Commenting Targets, Variants, Values, and Conditions

Braces { }

Comments delimited by braces can be used in the entry ports of Targets, Variants, Values, and Conditions. Comments are especially useful in Targets and Variants. In a complex Variant or Target several pages long, it is difficult to decipher the Picture Editor language, so it is a good practice for the display builder to include comments that “walk through the action” in the port.

If there is a need to modify a Target, Variant, Value, or Condition, the comment should provide enough information to locate the area to be changed.

Variant Example

Figures 1, 2, and 3 show braces around comments in a Variant.

Figure 1 Commented Variant Example, Page 1 of 3

04 Jan00:43:082

\$F3>COM>CZ_LIQFGBR-0,0C-624,0N-ON

Variant At0,0Page1 of 3

Subpicture Or Text For Bad Value"Bad Value"

Variant Body

{in lockout/1 hour c21 inhibit}

if F_WAIT1H.PVFL THEN "LOCKED OUT; Liquefaction cannot be started"

{tnk/los/oil/fin ready flags are the main communication between c1 and graphics; the associated subpictures ask the 4 required startup questions.}

else if (not F_TNKRDY.PVFL)then s SUBS>TNKRDY

else if (not F_LOSRDY.PVFL)then s SUBS>LOSRDY

else if (not F_OILRDY.PVFL)then s SUBS>OILRDY

else if (not F_FINRDY.PVFL)then s SUBS>FINRDY

{n_c21ct is the hotstart counter; in cold start=0, hot start=1, lockout=2. this is helps determine whether to bring up the initial or restart targets.}

else if ((N_MSGPTR.PV =15) AND (N_C21CT.PV = 0) AND (NOT(F_INITIAL.PVFL)))then s SUBS>INITAL

else if ((N_MSGPTR.PV =15) AND (N_C21CT.PV = 1) AND (NOT(F_RESTRT.PVFL)))then s SUBS>RESTRT

{see page 2 for more}

<PAGE FWD> <PAGE BACK> to MOVE. <F2> for TFE. <F3> to JUMP. <F4> to DELETE.

mod

Enter Variant Information

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Continued on next page

Commenting Targets, Variants, Values, and Conditions, Continued

Figure 2 Commented Variant Example, Page 2 of 3

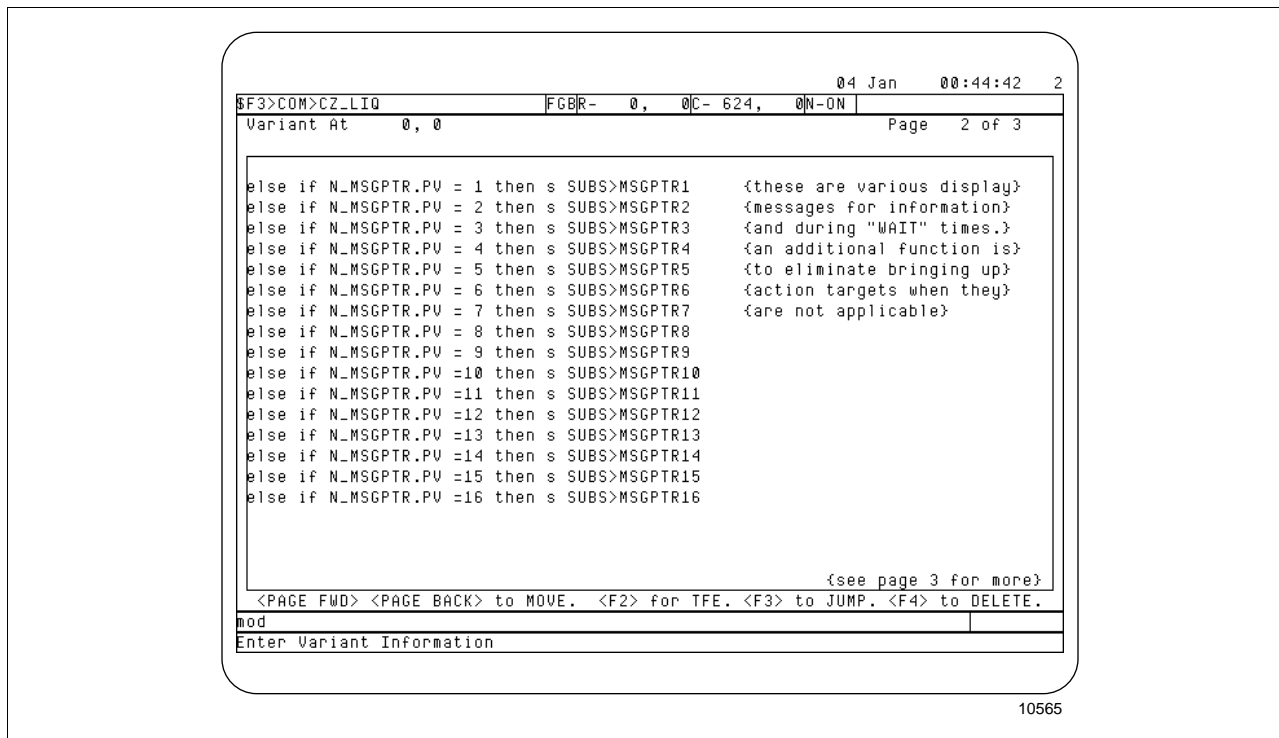
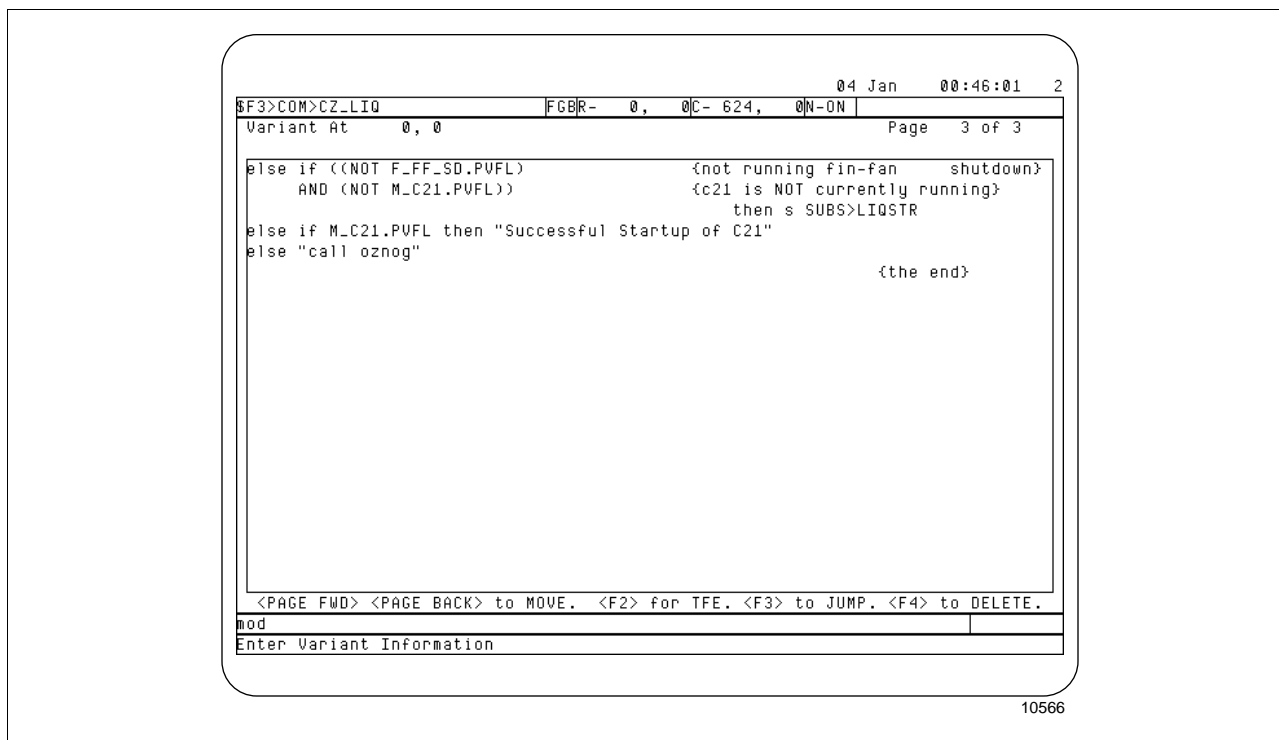


Figure 3 Commented Variant Example, Page 3 of 3



Continued on next page

Commenting Targets, Variants, Values, and Conditions, Continued

Target example

Figure 4 shows braces around comments in a Target.

Figure 4 Commented Target Example

04 Jan 83 00:48:34 2

\$F3>COM>CANC_PUR

FCB R- 0, 0 C- 216, 176 N-ON

Target At 216, 176

Page 1 of 1

Solid/Box/Invisible b

Action

PROMPT_C;

S_REAL(REAL01,0.0);S_INT(INT02G,0);

S_INT(INT01G,0);

UPDATE(-1,3); {this updates the above ddb's in the changezone only}

UPDATE(-1,2); {this updates int01g (global) in main display}

<PAGE FWD> <PAGE BACK> to MOVE. <F2> for TFE. <F3> to JUMP. <F4> to DELETE.

mod

Enter Target Specifications

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Continued on next page

Commenting Displays, Overlays, and Subpictures

Overall Comment

A large, multipage comment port specifically designed for documenting an entire display, overlay, or subpicture is accessed by entering the DEF COM command while in the Picture Editor.

The entry port allows entry of text in any format the user desires in order to document the display, overlay, or subpicture.

Example

Figure 5 shows the an example overall comment for a display.

Figure 5 Example of Overall Comment for a Display

The screenshot shows a terminal window with the following content:

```
01 Oct 13:57:54 2
F3>IC0> FGBR- 0, 0C- 0, 0N-ON
COMMENT Page 1 of 1

Created by Salvador Dali, 01Oct93, 1-800-555-1212, R410.3
REVISION RECORD:
DATE DESCRIPTION
-----
02Oct93 Added Trend. John Baldasorri, 602-789-5000, R410.3

GENERAL:
A general comment should explain what the display, overlay, or subpicture is
supposed to do.

OVERLAYS:
PATHNAME DESCRIPTION
-----
NET>ZON>DIGZONE Digital Composite user change zone.
NET>HIS>TREND Operator configured trend.

SUBPICTURES:
PATHNAME DESCRIPTION
-----
NET>VES>REACT Reactor graphic.

<PAGE FWD> <PAGE BACK> to MOVE. <F2> for TFE. <F3> to JUMP. <F4> to DELETE.
def com
Enter Comment Text
```

10568

Subpicture comment

The subpicture comment created by the DEF COM command should include a general explanation of what the subpicture is supposed to do. If a subpicture contains an overall comment, the comment is included when the subpicture is added to a display or overlay. The PE printout for the display or overlay shows the subpicture comment (see Figure 9).

Figure 6 shows an example of a subpicture comment.

Continued on next page

Commenting Displays, Overlays, and Subpictures, Continued

Subpicture Comment, continued

Figure 6 Example of Subpicture Comment

15 Oct 10:11:39 1

NET>JANH>BARTNKV9 FGBR- 0, 0C- 0, 0N-0N

COMMENT Page 1 of 3

GRAPHIC BARTNKV9 DATE 01/28/88

CHANGE HISTORY

NAME DATE CHANGE

JOHN DOE 01/28/88 DOCU FILE CREATED

OVERVIEW:

AN OPEN TANK WITH A BAR IN IT THAT GOES UP AND DOWN TO REPRESENT LEVEL.
THE LIMITS OF THE BAR ARE TAKEN FROM THE RANGE LIMITS OF THE POINT.

NOTES:

THIS SUB CAN BE SCALED.

CONDITION:

THE BAR WILL CHANGE COLOR BASED ON THE ALARM CONDITION OF THE TAGNAME
USED FOR LEVEL INDICATION. (RED BLINK = UNACKNOWLEDGED ALARM, RED =
ACKNOWLEDGED ALARM, WHITE = NO ALARM)

<PAGE FWD> <PAGE BACK> to MOVE. <F2> for TFE. <F3> to JUMP. <F4> to DELETE.

DEF COM

Enter Comment Text

15 Oct 10:13:01 1

NET>JANH>BARTNKV9 FGBR- 0, 0C- 0, 0N-0N

COMMENT Page 2 of 3

YOU MAY WANT TO MODIFY THE SUBPICTURE SO THAT INSTEAD OF WHITE, IT IS THE
SAME COLOR AS YOUR PROCESS FLUID FLOWS.

TARGET:

VALUE:

&A - ANALOG INPUT (OR REGULATORY) POINT NAME
THERE ARE SEVERAL PARAMETERS OF &A USED : PV, PVEULO, PVEUHI.

VARIANTS:

SUB PICTURES:

<PAGE FWD> <PAGE BACK> to MOVE. <F2> for TFE. <F3> to JUMP. <F4> to DELETE.

DEF COM

Enter Comment Text

10692

Continued on next page

Commenting Displays, Overlays, and Subpictures, Continued

Comment guidelines

If there is a need to modify a display, overlay, or subpicture the documentation should provide enough information to locate the screen areas and functionality.

A comment for a display, overlay, or subpicture should include the following, when applicable:

- a general explanation of what the display, overlay, or subpicture is supposed to do,
 - a list of the DDB variables that are used and how they are used (Standard, User, and Equipment List DDB variables—User and Equipment List DDB variables may also be commented in their own declare file),
 - file pathnames, including
 - user DDB declare file,
 - overlay source and object files,
 - subpicture source files,
 - Equipment List-related source and object files,
 - Who, When, How, What
 - Who created the display, overlay, or subpicture?
 - When was it created?
 - How can that person be contacted?
 - What release of LCN software was used?
 - date last revised and revision comments,
 - general explanation of how DEFINE INITIAL, FINAL, HELP, ASSOC, and so forth, are being used,
 - color conventions (either refer to the text file where the display conventions are documented or append the text to the display's comment port),
 - the type of process network accessed by the display (UCN or Hiway).
-

Comment Template

Template

You may choose to create a template for documenting custom displays. A template provides some standardization that can prove useful when you are trying to modify/interpret displays created by others.

Example

Figure 7 is an example text file template for documenting a custom display.

Figure 7 Example of Text File Template To Document Schematics

```
DOCTEMP.XP
11/09/93 09:07:30

GRAPHIC CHANGE HISTORY: _____ CREATED __/__/__
                        _____ UPDATED __/__/__

-----
OVERVIEW:

-----
NOTES:

-----
CONDITIONS:
INHERIT

-----
TARGETS:

-----
VALUES:

-----
VARIANTS:

-----
SUB PICTURES:

-----
CHANGE ZONES:

-----
GLOBAL DISPLAY DATA BASE

-----
LOCAL DISPLAY DATA BASE

-----
```

Picture Editor Printout

PE printout

If detail is needed on particular display objects, select those objects from the display source file in the PE, then use the Print Select command to print out the detailed source description. Use the Multiple Print command to print more than one schematic at a time.

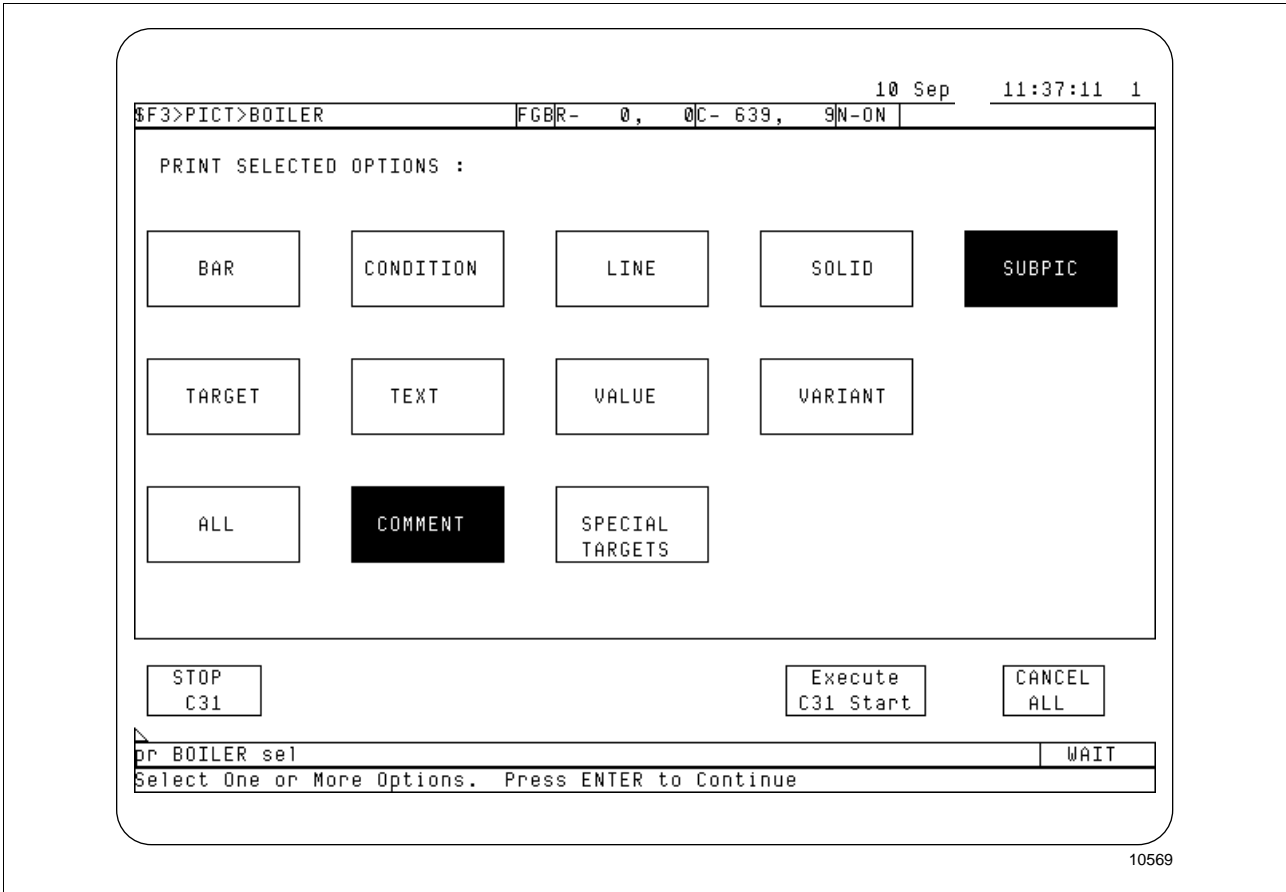
CAUTION

A WORD OF CAUTION—The PE printout can be difficult to read and quite lengthy. For a high density display, the printout could take up to 30 minutes. During this time, the screen is “locked” and no other work can be done; however, in R400 and later, the output can be sent to a file. The print to file is much quicker and it can be “massaged” in the Text File Editor.

Example

The subpictures and the main comment for display BOILER are specified in the Print Selection menu shown in Figure 8. A portion of the resulting printout is shown in Figure 9. The main display comment is at the end of the printout as shown at the bottom of Figure 9.

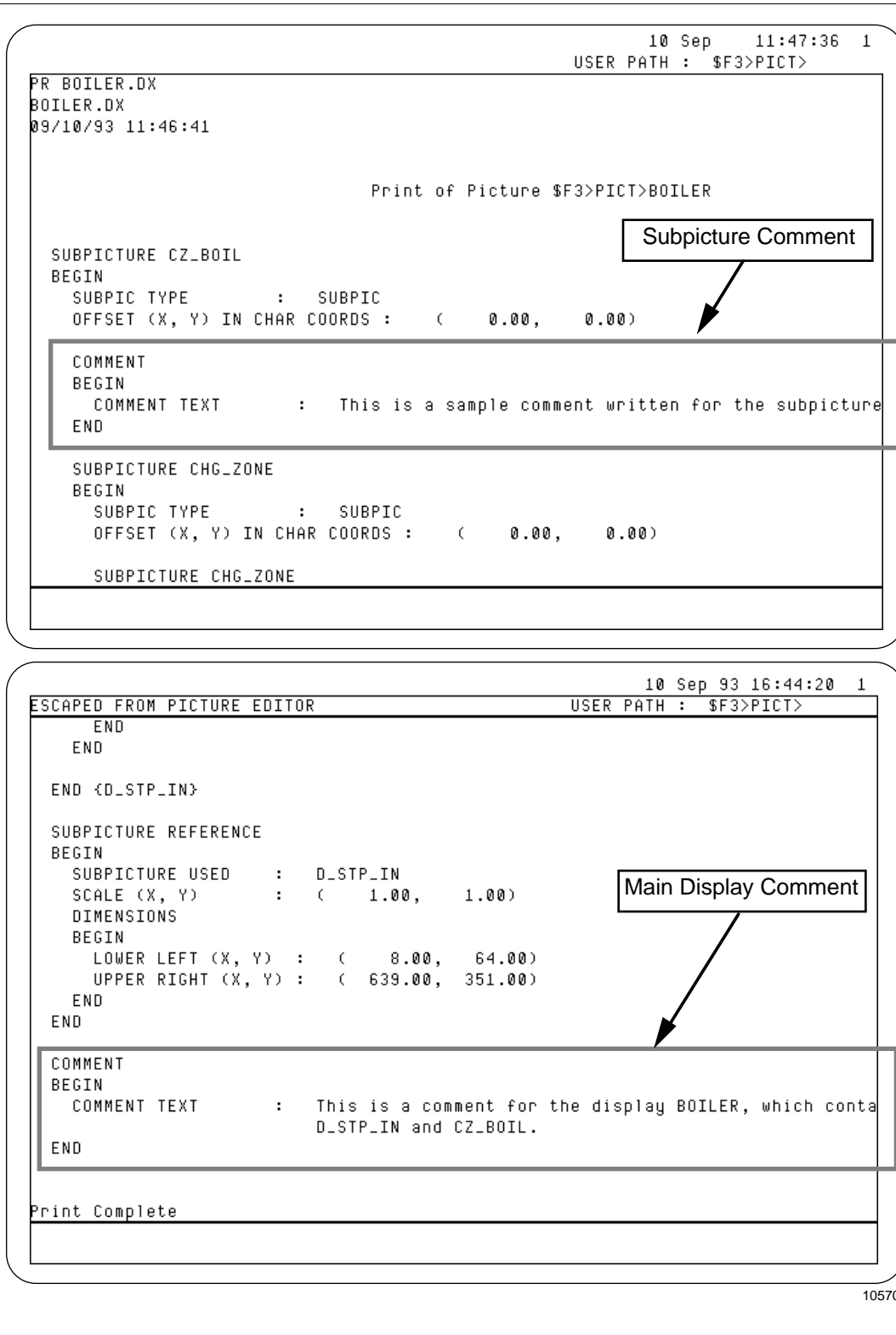
Figure 8 PE Print Selection Menu



Continued on next page

Picture Editor Printout, Continued

Figure 9 PE Print Output



Source File Naming Conventions

Naming convention

You may want to establish standard file- and directory-naming conventions to make it easier to locate custom display source files.

Examples:

Location	Naming Convention
Custom Display Volume	PICT
User Directories	SUB, CHZ, OVL, DDB
Files	AAAAAAA0 - Schematics (current)
	AAAAAAA1 - Schematics (1 rev. back)
	AAAAAAA2 - Schematics (2 revs. back)
	AAAAAAA8 - Change Zones
	AAAAAAA9 - Subpictures

File descriptors

In R400 and later, 64 character file and directory descriptors can be configured by the user to make it easier to locate files (MFD command in Command Processor).

The file descriptor option must have been selected for each desired volume during the History Module Volume Configuration portion of NCF configuration.

Written Exercise

Methods of Documenting

Instructions

List the various ways you can document custom displays:

[illegible]

Methods of Documenting

Answers

Online Documentation:

1. Create a design specification to describe the general design information of a display or a family of displays.
 2. Use Picture Editor configuration forms to document the initial display design.
 3. Use bracketed comments { } within the data entry ports of Targets, Variants, Conditions, and Values to describe the purpose/action of the item.
 4. Use the Picture Editor DEF COM command to write descriptions of the main display, its overlays, and its subpictures.
 5. Use the MFD command of the Command Processor to assign File Descriptors to the various files associated with a custom display:
 - display source file (.DS)
 - overlay source files (.DS)
 - subpicture source files (.DS)
 - User DDB declare file (.DF)
 - Equipment List file (.QS)
 6. Use the Find Names utility to document the DDB variables used by a display or overlay.
 7. Use the Picture Editor PR or MP command to print to a file the detailed source description of an entire display.
-

Directions



DIRECTIONS—This is the end of the study material for this module. Discuss questions concerning the study material or the lab activities with a colleague or a course manager

If you are satisfied that you have achieved the objectives of this module, continue with the next section, the Student Proficiency Evaluation.

Student Proficiency Evaluation

Criterion Test

Instructions

In your own words describe to your course manager the ways to document custom displays.

Self-Evaluation

Answers

The methods you choose to document a custom display should provide enough information to locate the standards, screen areas, and functionality if there is a need to modify the display.

The documentation should not be a burden, but an aid in maintaining the TDC 3000 database.

The written exercise in this course module summarizes the various documentation methods that are available.

Directions



DIRECTIONS—This is the end of this module.

Use your course map to

- Get your course manager to sign off this module.
- Choose your next eligible module.

If you have a question

- Ask your course manager.
-

Honeywell

Industrial Automation and Control

Automation College

2820 W. Kelton Lane

Phoenix, AZ 85023-3028

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